

# A REVIEW OF COMMON APPROACHES TO UNDERSTANDING ONLINE CONSUMER BEHAVIOUR

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## ABSTRACT

One of the main changes in modern consumer behaviour has been the transition from a passive to an active and informed consumer, and one of the key tools of this so-called “postmodern” online consumer has been the Internet. An examination of previous research into online consumer behaviour shows that there may be significant differences from their terrestrial counterparts, however problems of demographic bias, lack of observational data and the Internet’s rapid pace of change may have made it difficult to accurately model this behaviour. This paper reviews research into the various issues that may differentiate online consumer behaviour, and concludes that a more comprehensive approach to modelling online consumer behaviour is needed in order to coherently describe the online consumer experience.

## KEYWORDS

Human-Computer Interaction, Electronic Commerce, Consumer Behaviour, Online Shopping, Online Retail

## 1. INTRODUCTION

*“When we wonder whether we ‘buy’ an argument, we acknowledge...that selling and consuming are inseparable from the modes in which modern minds think or speak themselves.”* (Bowlby, 1993)

Whether it’s viewed as a chore, a way of achieving a goal, a way to pass the time, a preferred means of entertainment, a means of expressing identity (Szmigin, 2003) or as an addiction, it is clear that shopping occupies an ongoing role in our lives and consciousness. As consumers, we grapple with deciding what goods and services we want and how we will obtain them on virtually a daily basis. And never before have we had such a variety of ways in which to express ourselves as consumers – high streets, malls, airports, catalogues, shopping TV channels, magazines, even the placement of vending machines in schools and institutions, all present us with decisions to be made, actions to be taken.

Of the various channels to market, the one that has probably received the greatest attention and produced the highest expectations of impact and adoption is the Internet. Prior to the Internet, technology had only had a relatively low scale impact on consumer behaviour (Grewal et al., 2004). The shopping trolley may have changed how much we could carry, the car changed where we shopped, and bar code scanning changed how vendors operated, but according to writers such as Feather (2002) the Internet promised to change the very way we shopped.

In reality, while e-Commerce is no longer simply the novelty it was back in the 90’s, as of 2004 it accounted for only about 6% of retail spend in the UK a figure only slightly above that of traditional catalogue retailers (Pesola, 2004). Many theories have been offered to explain existing levels of online shopping – issues of trust, levels of Internet adoption, issues of tangibility and fulfilment, etc. – but one area that requires further examination is whether we truly understand how online consumers behave in the first place.

This paper will look at how research into online consumer behaviour has been approached, and whether this research has been able to produce the understanding needed to construct behavioural models that can help realise the full potential of e-Commerce as a viable channel to market .

## **2. THE “POSTMODERN” ONLINE CONSUMER**

For some time, various researchers recognised that a number of consumers would be drawn to environments that could facilitate various aspects of product selection and purchasing. Over thirty years ago McNeal (1973), recognising that shopping in many circumstances could be onerous, predicted that over time consumers would turn to alternative channels “to avoid some of this unpleasantness”.

When e-Commerce began to reach consumers in the 1990’s, some saw the appeal as the “...endless search for convenience” (Grewal et al., 2004). Bellman et al. (1999) showed that the typical online consumer led a “wired lifestyle” and was “time starved”, again suggesting that convenience was key. If that was indeed the case, then viewing online consumer behaviour as virtually identical to terrestrial consumers would make sense, with the Internet being used as simply a different means to conduct the actual purchase transaction, much like catalogue shopping.

However, *The Financial Times* (Pesola, 2004) claimed that at the current rate of growth, 37% year-on-year, online shopping will be 10% of the total UK retail market by 2005. As catalogue shopping has never been more than 5% of the UK retail market (Pesola, 2004), this strongly suggests that for the consumer, the attractions of e-Commerce could represent something more than a convenience-driven variation of the catalogue experience.

Meanwhile, one of the key ongoing changes in consumer behaviour has been the transition from a passive reacting subject to the so-called “postmodern” consumer, one who is creative and innovative and who interacts and initiates experiences, shaping their shopping experience rather than having the experience thrust upon them (Szmigin 2003; McCarthy and Wright, 2004). If one of the key tools of the postmodern consumer is the Internet, then it is worth examining how the online consumer behaves.

## **3. IS THE ONLINE CONSUMER DIFFERENT FROM THE TERRESTRIAL ONE?**

While researchers tend to agree that online shopping is somehow different from its terrestrial counterpart, there is not much agreement on the nature or extent of these differences. Also, caution must be exercised when drawing exact analogies between online and terrestrial consumer behaviour as this approach relies on the assumption that the actions of an online consumer are similar in significance to their terrestrial counterparts. For example, a recent study on the likelihood of consumers to abort online transactions started with the assumption that such actions “represent potentially significant lost sales for e-retailers” (Cho, 2004), neglecting the fact that the online consumer, unlike their terrestrial counterpart, may abandon a transaction not because of perceptions of risk or attitudes to online shopping but simply because they never meant to complete the transaction in the first place. The relative ease and anonymity with which the consumer can load and subsequently abandon an online shopping cart gives this action a considerably different slant from abandoning a shopping trolley in the middle of a busy supermarket..

With this caveat in mind, the following describes some examples of possible differences between terrestrial and online consumer behaviour.

### **3.1 Technology Adoption**

One possible factor affecting online consumer behaviour is the area of technology adoption and how general use of the Internet affects consumer behaviour online. Eastin (2002) showed that consumer adoption of online shopping could be best predicted by Internet self-efficacy, followed by perceived financial benefits, previous adoption of telephone shopping, and perceived convenience. However, this leaves open the question of whether the level of self-efficacy could actually predict how the consumer will behave once such technology is adopted. In fact, it would seem online consumers place different priorities on motivating factors such as perceived usefulness and price sensitivity (O’Cass and Fenech, 2003), and experience in online shopping itself shapes behaviours over time as the consumer’s environment is affected by such phenomena as the feedback and product/vendor information gathered online (McCarthy and Wright, 2004).

## **3.2 Convenience and Decision Support**

The approach of researchers such as Keen et al. (2004) and Miles et al. (2000) to understanding online consumer behaviour centred around e-Commerce as simply a facilitator of various stages of traditional consumer behaviour, particularly decision making, implying that the only difference between a terrestrial and an online consumer is a desire for convenience and timesaving.

However, Srinivasan et al. (2002) showed that convenience itself does not appear to be a significant factor in loyalty to an online vendor, but this could also suggest that convenience has become a hygiene factor – something online consumers take for granted and which is only noticeable by its absence.

As for decision making, the fact that the depth and breadth of information available on the Internet meets the consumer's need for information in a way that a conventional retail environment cannot, suggests that the online consumer looks to e-Commerce to do far more than simply facilitate traditional consumer decision making.

## **3.3 Market Dynamics**

The information gathering capability of the online consumer can profoundly affect behaviour through changes in market dynamics. Traditional EoI (Economics of Information) theory, which states that as consumers are not perfectly informed about all alternatives available in the market, their perceptions of price dispersion (variations in pricing for the same products in different markets) or information variation will drive them to search behaviour during the decision making process. In addition, the extent to which consumers are willing to search for information will be dictated by the perceived benefits versus costs of the search and their previous experience and knowledge.

However, for online consumers, factors such as lower search costs and greater availability of information can increase the extent of searching done and the amount of information gathered, allowing the online consumer to consider more alternatives than their terrestrial counterpart. Biswas (2004) suggested that over time, this activity could actually reduce price dispersion amongst vendors who traditionally relied on information asymmetries to maintain differential pricing, leading to online consumers becoming less price-conscious in favour of other factors such as personalisation and brand loyalty, and consequently more willing to pay a premium for higher levels of service, customised offerings, recognised brands, etc. This phenomena may be one explanation for Amazon's continuing domination of their market, despite the fact that they are not necessarily the cheapest vendor.

## **3.4 Loyalty and Trust**

The facilities and opportunities inherent in e-Commerce suggest that consumer loyalty can manifest itself differently in the online environment (Srinivasan et al., 2002). For example, the ability to customise not only the products and services shown to the consumer, but the actual transactional environment itself is a facility far beyond the capability of a terrestrial store. Also the importance of consumer loyalty may take on a different characteristic when access to the competition is only a click away, and when brand loyalty may become a defence against perceptions of risk (Gupta et al, 2004).

This leads on to the issue of trust. Whether viewed as an expectation based on past performance (Shneiderman, 2000), a strategy for reducing uncertainty (Egger, 2003), a willingness to rely on an exchanging partner (Lee et al., 2000), or a perception of reliability (Fogg, 2003), it is clear that trust plays a role in online consumer behaviour. The question is – how important is that role to the online consumer?

For the terrestrial consumer trust is merely one of many factors in purchasing behaviour and as Adcock et al. (2001) and Solomon et al. (2002) pointed out, it is by no means the most important. Much of the background data used in studies of online trust is based on consumer attitude surveys done in 2000 or earlier, and may not take into account subsequent changes in attitudes and behaviour. Recent studies by Cho (2004) and Wolfenbarger and Gilly (2003) suggest that online consumers may not see trust as a major contribution to their shopping experience, but it is not clear whether this is because online consumer trust is becoming, like terrestrial consumer trust, another hygiene factor (as could be argued for established online vendors such as Amazon), or whether this is an indication that online consumers are becoming more accepting of risk.

### **3.5 Products versus Services**

In a terrestrial environment, products are generally tangible during shopping, of relatively uniform quality, can be stored and inventoried, and product production proceeds sale which proceeds consumption, Services, on the other hand, are intangible, can vary greatly in quality, cannot be stored and the production and consumption of a service is normally simultaneous and follows the sale, consequently there is more scope for customer dissatisfaction if there are any problems with place or time or vendor resources. But for the online consumer, both products and services are effectively intangible at point of purchase, services are often standardised in quality to a degree not found terrestrially as they are not as dependent on time and place, product quality may vary due to shipping and handling processes, and while services cannot be stored online the fact that they can be purchased and consumed at any time means that online consumers can derive immediate satisfaction from purchasing services but satisfaction from products is subject to the delays inherent in shipping.

In applying this perspective to consumer intention to adopt e-Commerce, Liu and Wei (2003) found that when contemplating online shopping consumers were consequently more concerned about risk for products rather than services, and more concerned about perceived ease of use for services than products.

### **3.6 Site Design**

Given the contention of researchers such as Turley and Milliman (2000), Eroglu et al. (2001) and Childers et al. (2001) that the design of retail environments is both influenced by and influences terrestrial consumer behaviour, it would seem reasonable to assume principles of retail design may be relevant to online consumer behaviour.

Some correlations between terrestrial and online design elements are relatively straightforward such as the impact of the shop window versus the impact of a site's home page (Lohse and Spiller, 1999). Other correlations can be more problematic, such as the impact of store layout versus site layout. In terrestrial design, Grid layout (rectangular arrangement of displays and long aisles) is considered more effective for repetitive planned purchases and is therefore the layout most commonly used in supermarkets, while Freeform layouts (asymmetric arrangement of displays and aisles in different sizes and shapes) is favoured for department stores and other environments where consumers are being encouraged to browse. However, Vrechopoulos' (2004) experiment translating these layouts to online equivalents suggested that for online supermarkets the online equivalent of a Grid layout (strict hierarchical structure of products categories, sub-categories, etc.) is less effective than a Freeform-type equivalent. This would imply that there may be some differences in the relationship between retail design and online behaviour, or at least a problem in translating retail design principles to an online environment. In any event, what is clear is that more study is needed to examine what design elements affect online consumer behaviour.

### **3.7 Empowerment, Persuasion and Entertainment**

One of the main aspects of the online consumer experience that takes it beyond terrestrial behaviour is that of empowerment. The ability to shop world-wide in relative anonymity at anytime from virtually any location, combined with the availability of real-time product and competitor information can only serve to increase the consumer's sense of freedom and power. Combined with the interactivity inherent on the Web, this empowerment allows them to more effectively fulfil desires and fantasies, as illustrated by the ongoing success of gambling and pornography sites. Even for those consumers with more mainstream tastes, features such as Amazon's personalised welcome pages and tailored recommendation lists can provide consumers with a "powerful feeling of discovery" (Nielsen, 2003).

But is a consumer truly empowered when using the Internet? In his landmark paper on online experiences, Shih (1998) described the concept of Bricolage on the Internet, whereby consumers can manipulate objects such as links and bookmarks to control the flow and direction of information. Shih stated that Bricolage is not only a powerful tool for learning and retaining product information, but also allows consumers to come away with their own selective understanding of the information and bypass unwanted or extraneous data. However, as Wachbroit (2000) pointed out, the drawback to personalised information handling is that it can lead to filtering out of information not just deemed irrelevant but also information that

may contradict established viewpoints. A consumer in a supermarket who must pass through most of the aisles in order to complete their week's shopping will be exposed to various products that they may not have initially been interested in or even knew existed, but by virtue of display or appeal to the senses may decide to purchase. That same consumer online, by controlling what parts of the online supermarket they visit, will reduce if not completely eliminate this exposure, minimising their likelihood of making unplanned purchases but also in the long run possibly limiting rather than expanding their shopping experience by not being exposed to new products or services they may find useful or enjoyable. Consequently, the online consumer may be losing power rather than gaining it.

The emphasis on empowerment may also suggest that online consumers are so independent that they are impervious to selling techniques. However, Fogg's (2003) work on Persuasive Technology suggested that online consumers can and do react to persuasive media, and that a well-programmed e-Commerce site can not only adjust its sales pitch depending on feedback from the customer, but unlike a salesperson can be more persistent, offer anonymity, handle large volumes of data, use multiple modes of influence, and be ubiquitous – in effect, become more effective than a human at selling.

One common limitation with much of the research comparing terrestrial and online behaviour is a tendency to slip into a utilitarian view of shopping, thereby neglecting the hedonic aspects of online shopping. To many consumers, shopping is often not simply a task but also a form of entertainment and/or social interaction (Chen et al., 2002) and it is not unreasonable to assume that consumers may also have similar expectations of online shopping, especially those already using the Internet for entertainment and interaction (Shang et al., 2004). Parsons (2002) identified personal and social motivators such as diversion, self-gratification and peer group identification as significant motivators for online consumers. In fact, Childers et al. (2001) demonstrated that even for such a prosaic activity as grocery shopping, enjoyment could be a significant factor in attitudes, showing that the desire for change, creativity and self-expression must be considered part of the online consumer experience.

A possible source of entertainment in online shopping is that of “flow” – the psychological state reached during an activity of high concentration, a sense of time distortion and a feeling that one is using the optimal balance of skills and challenges. Smith and Sivakumar (2004) argued that flow, which produces prolonged feelings of pleasure and is normally associated with tasks such as sports, games and hobbies, can also be experienced using the Internet. This would suggest that for those consumers already experiencing flow while using the Internet, there is the potential to entice consumers by providing an experience of flow during online shopping through Telepresence – a vivid, interactive and user-controlled environment (Shih, 1998). However, Smith and Sivakumar also raised the possibility that too intense or too prolonged an experience could actually distract the consumer from making a purchase, or alienate the consumer if ill-timed. For instance, a multi-media virtual reality tour of a holiday package may enchant the consumer who is deciding where to travel, but could quickly become annoying during the booking process.

## 4. DISCUSSION

If modelling is a key tool for understanding a process, then it follows that modelling consumer behaviour is critical for understanding the process whereby a consumer decides what to purchase, where, when, how, from whom, and perhaps most importantly, why (Walters, 1976).

Simple sequential models are often used to introduce the concept of consumer behaviour. The work of Adcock, Halborg and Ross (2001) is representative of this approach, using a 7-stage model of:

1. Need Recognition
2. Choice of Involvement Level
3. Identification of Alternatives
4. Evaluation of Alternatives
5. Decision
6. Action
7. Post-Purchase resolution

While these simple models may be useful for delineating the stages of consumer behaviour, they may not adequately define the process flow, nor the impact of environmental factors on behaviour. To present a more comprehensive view of consumer behaviour, researchers such as Walters, McNeal (1973) and Markin (1974) have used more dynamic models that in addition to the stages listed above also include areas such as need-triggering events, environmental factors that can affect consumers at any stage in the process, and how post-purchase resolutions feedback into future consumer decisions.

Regardless of the type of models used, what is clear is that consumer behaviour is complex and neither static nor binary. As Miller et al. (1998) pointed out, a consumer can be an eager shopper in one context and a reluctant one in others, and the study of consumer behaviour is continually evolving as consumers and their environment changes. Consequently, while much of the research examines specific factors that may or may not differentiate the online consumer, understanding the role these factors play can only be done in the context of an overall understanding of the online consumer's behaviour. To take existing consumer behaviour models for granted, or to assume that the online consumer is exactly like their terrestrial counterpart except, for example, specific decision-making processes, is to miss the potential ways in which the online consumer may be motivated to action long before the consumer enters an e-Commerce site.

Assessing consumer behaviour models requires robust data concerning online consumers, and this is where three problems in the ways the existing data has been collected and analysed become evident.

First and foremost one must consider the rapid pace of technological change, which according to researchers such as Grewal et al. (2004) and Limayem et al. (2000) is causing online shopping to move very quickly through adoption cycles of introduction to growth and eventual maturity. This would suggest that research based on consumer attitudes of 2000 may not accurately reflect behaviour of online consumers in 2005. A good example of this problem is illustrated by research into the issues of trust in e-Commerce, where much of the background data is based on consumer attitude surveys done in 2000 or earlier (some as far back as 1997) and may not really take into account how those attitudes and subsequent behaviour may have changed since then. For example, online auctions via eBay, before 2000 considered a somewhat fringe activity, have according to the BBC (2004a) become the most popular form of consumer-based e-Commerce, and security issues virtually unheard-of in 2000 such as "phishing" are now the subject of mainstream news stories (BBC, 2004b). It is not unreasonable to conclude that the consumer's expectations of trust in e-Commerce has altered in the past few years.

The second data collection problem is with the use of students as subjects in many (if not most) academic experiments and studies. As Wolfenbarger and Gilly (2003) point out, by using such a narrow group of subjects these studies may have demonstrated not overall online consumer attitudes or behaviour but rather the attitudes and behaviour of a specific demographic group of the same age, background and value set. As one example of why demographics must be taken into consideration in examining online consumers just as it is in the terrestrial world, Wood's (2002) study of attitudes towards e-commerce discovered that different age groups had different expectations of the future of online shopping, with Baby boomers (those born between 1946-1965) seeing online shopping as a matter of convenience, while "boomlets" (those born between 1977-1997) seeing product customisation as the key benefit.

The third, and perhaps most important problem with much of the research to date is, as Limayem et al. (2000) demonstrated, the tendency to measure attitudes and intentions but not actual purchasing behaviour. Research subjects have been surveyed for attitudes, intentions or past experiences of online shopping, or asked to make hypothetical purchases in artificial online shops, or asked to browse actual online shops but stop short of completing a purchase. Consequently there is little data available on how online consumers behave when they are actually searching, selecting and paying for items in the "real" world. This real-world data is critical to any understanding of consumer behaviour, as reliance on hypothetical events or user description of behaviour can produce incomplete or even misleading results – Miller et al. (1998) noticed that in many instances participants in marketing focus groups gave opinions and answers that were not supported by actual observation of their shopping habits. The importance of real-world data in understanding consumer behaviour is particularly demonstrated by the work of Underhill (2000) who has used ethnographic and observational research to develop new understandings of terrestrial consumer reactions to such areas as store design and layouts, clarifying and sometimes even contradicting information from quantitative research. The methodologies used by Underhill for gathering terrestrial data can and should be extended to the online environment.

## 5. SUGGESTIONS FOR FURTHER RESEARCH

This review shows there is a lack of a comprehensive understanding of the online consumer, one that recognises both behaviour as a consumer and as a user of the Internet and how these two behaviours shape and are shaped by each other. To address this gap, several areas of research are recommended. Current survey data is needed, supported by observational research of demographically representative samples of online consumers conducting actual shopping and purchasing. Parallels between online and terrestrial behaviour should be examined through comparing phenomena such as movements of consumers through e-Commerce sites with terrestrial traffic patterns. From this research relevant and comprehensive models of online consumer behaviour can be built and used to construct frameworks for e-Commerce site design.

## 6. CONCLUSIONS

As in the terrestrial world, research into online consumers requires a backdrop of comprehensive behavioural models in order to accurately assess any individual aspects that may influence behaviour. The lack of such models to date, combined with the age of the supporting data, potential demographic biases and lack of information on actual consumer behaviour, may have led to a fragmented view of online consumer behaviour potentially out of step with today's consumer. Development of online consumer behavioural models, underpinned by "real world" research, is required to inform understanding of the enabled and empowered postmodern consumer.

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